

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. - 14. (cancelled)

15. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:

forming a buffer layer on a transparent semiconductor substrate so as to be lattice-matched with the semiconductor substrate;

sequentially forming a first contact layer, a first cladding layer, a light-emitting layer, a second cladding layer, and a second contact layer on the buffer layer;

partially removing the first cladding layer, the light-emitting layer, the second cladding layer, and the second contact layer to expose a surface of the first contact layer;

forming a first electrode on the exposed surface of the first contact layer; and

forming a second light-reflecting electrode on a surface of the second contact layer.

16. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:

sequentially forming a buffer layer, a first contact layer, a first cladding layer, a light-emitting layer, a second cladding layer, and a second contact layer on a semiconductor substrate;

partially removing the first cladding layer, the light-emitting layer, the second cladding layer, and the second contact layer to expose a surface of the first contact layer;

forming a first electrode on the exposed surface of the first contact layer;

forming a second light-reflecting electrode on a surface of the second contact layer; and

forming a light extraction window at a portion of the semiconductor substrate at which the light extraction window faces the second electrode.

17. (cancelled).

18. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:

sequentially forming a buffer layer, a first cladding layer, a light-emitting layer, a second cladding layer, and a contact layer on a transparent semiconductor substrate;

recessing a surface of the contact layer;

forming a first light-reflecting electrode on the surface of the contact layer; and

forming a second electrode on a surface of the semiconductor substrate so as to remove a portion at which the second electrode faces the first electrode.

19. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:

forming a buffer layer on a transparent semiconductor substrate so as to be lattice-matched with the semiconductor substrate;

sequentially forming a first cladding layer, a light-emitting layer, a second cladding layer, and a contact layer on the buffer layer;

recessing a surface of the contact layer;

forming a first light-reflecting electrode on the surface of the contact layer; and

forming a second electrode on a surface of the semiconductor substrate.

20. (cancelled).

21. (original) A semiconductor light-emitting element having a light-emitting layer for emitting light in a direction of plane, comprising;

a photonics crystal layer on at least one surface of the light-emitting layer.

22. (original) An element according to claim 21, wherein said photonics crystal layer is formed on the light-emitting layer on a side of a compound semiconductor light-emitting element opposite to a light extraction surface.

23. (original) An element according to claim 21, wherein said photonics crystal layer is formed on the light-emitting layer on a light extraction surface side of the semiconductor light-

emitting element, and a through dislocation exists on the light extraction surface in a substantially vertical direction to pass light emitted by the light-emitting layer.

24. (cancelled).
25. (previously presented) A semiconductor light-emitting element comprising:  
a semiconductor substrate;  
a light-emitting layer formed on one surface of said semiconductor substrate; and  
a photonics crystal layer fused on another surface of said semiconductor substrate,  
wherein the other surface of said semiconductor substrate has a rounded edge.
26. (original) A semiconductor light-emitting element comprising:  
a photonics crystal layer; and  
at least one light-emitting element formed on each of two surfaces of said photonics  
crystal layer,  
wherein said light-emitting elements emit light with different emission wavelengths.
27. (original) A semiconductor light-emitting element comprising:  
a transparent semiconductor substrate;  
a Bragg reflective layer formed on said semiconductor substrate;  
an active layer formed on said Bragg reflective layer; and  
a photonics crystal layer formed on said active layer.
28. (withdrawn) A semiconductor light-emitting element manufacturing method comprising  
the steps of:  
sequentially forming a buffer layer, a first cladding layer, a light-emitting layer, and a  
second cladding layer on a first semiconductor substrate;  
forming a photonics crystal layer on a second semiconductor substrate;  
fusing the second cladding layer and the photonics crystal layer; and  
removing the first semiconductor substrate and the buffer layer.

29. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:
- sequentially forming a buffer layer, a contact layer, a first cladding layer, a light-emitting layer, and a second cladding layer on a first transparent semiconductor substrate;
  - forming a photonics crystal layer on a second semiconductor substrate;
  - fusing the first semiconductor substrate and the photonics crystal layer; and
  - removing the second semiconductor substrate,
- when the photonics crystal layer contains a through dislocation on a light extraction surface in a substantially vertical direction to pass light emitted by the light-emitting layer.
30. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:
- forming a contact layer on a semiconductor substrate;
  - corrugating a surface of the contact layer; and
  - sequentially forming a first cladding layer, a light-emitting layer, and a second cladding layer on the contact layer,
- wherein a gradient index is given by the corrugated interface of the contact layer in contact with a first cladding layer, and light emitted by the light-emitting layer is reflected by the interface.
31. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:
- forming at least a light-emitting layer on a semiconductor substrate; and
  - processing an edge of the semiconductor substrate to round the edge.
32. (withdrawn) A semiconductor light-emitting element manufacturing method comprising the steps of:
- forming a buffer layer on a first transparent semiconductor substrate;
  - forming a Bragg reflective layer on the buffer layer;
  - sequentially forming a light-emitting layer, a cladding layer, and a bonding layer on the Bragg reflective layer;

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forming a photonics crystal layer on a second semiconductor substrate;  
bonding the cladding layer and photonics crystal layer via the bonding layer; and  
removing the second semiconductor substrate.